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**(54) PRODUCTION OF
OPTICAL RECORDING
MEDIUM, SPUTTERING
METHOD AND SPUTTERING
TARGET****(57) Abstract:**

PURPOSE: To provide the optical recording medium which has less defects in a recording layer and has high quality with high productivity by specifying the crystalline structure of the metals and nonmetal elements of targets at the time of forming a inorg. dielectric film by a DC reactive sputtering method.

CONSTITUTION: An optical recording film and an optical recording medium film having an inorg. dielectric film contg. the metal elements and/or the semimetal elements are formed on a substrate, by which the optical recording medium having the recording layer consisting of both is produced. The inorg. dielectric film is formed by subjecting

the sputtering targets respectively contg. the crystals of the metal elements and/or the nonmetal elements to DC sputtering in a reactive gaseous atmosphere. The crystals of the metal elements and the nonmetal elements have the crystalline structure provided with the lattice faces having the gaps to permit the intrusion of the atoms, ions or radicals originating in reactive gases into the unit lattice and the lattice faces not having these gaps. The sputtering targets are so constituted as to hinder the formation of the inorg. dielectric substance on their sputtering surfaces in the stage of forming the inorg. dielectric film.

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